



ANALYTICAL REPORT

Lab Number:	L1109562
Client:	Haley & Aldrich, Inc. 100 Corporate Place Suite 105 Rocky Hill, CT 06067-1803
ATTN:	Deborah Motycka Downie
Phone:	(860) 282-9400
Project Name:	23 BARRY PLACE
Project Number:	35034-103
Report Date:	07/11/11

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Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

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Project Name: 23 BARRY PLACE
Project Number: 35034-103

Lab Number: L1109562
Report Date: 07/11/11

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1109562-01	806 (4-6)	Not Specified	06/28/11 11:05
L1109562-02	AOC9-301S1	Not Specified	06/28/11 11:30
L1109562-03	AOC9-302S1	Not Specified	06/28/11 11:35
L1109562-04	AOC9-303S1	Not Specified	06/28/11 11:40
L1109562-05	DUP3062811	Not Specified	06/28/11 11:45

Project Name: 23 BARRY PLACE
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**CT DEP Reasonable Confidence Protocols
Laboratory Analysis
QA/QC Certification Form**

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed (including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CT DEP method-specific Reasonable Confidence Protocol documents)?	YES
1a	Were the method specified preservation and holding time requirements met?	YES
1b	VPH & EPH Methods Only: Was the VPH or EPH Method conducted without significant modifications (see Section 11.3 of respective Methods)?	N/A
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	YES
3	Were all samples received at an appropriate temperature (<6°C)?	YES
4	Were all QA/QC performance criteria specified in the CT DEP Reasonable Confidence Protocol documents achieved?	YES
5a	Were reporting limits specified or referenced on the chain-of-custody?	YES
5b	Were these reporting limits met?	YES
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	NO
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	NO

Note: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or question B is "No", the data package does not meet the requirements for "Reasonable Confidence".

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Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.

Report Submission

This report replaces the report issued July 8, 2011. The sample IDs for L1109562-03 and -04 have been updated.

RCP Related Narratives

ETPH

A copy of the Mass Discrimination Check is included as an addendum.

Metals

In reference to question 6:

At the client's request, all submitted samples were not analyzed for the full RCP list of constituents identified in

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Case Narrative (continued)

the method specific analyte list presented in the RCP documents.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Lisa Westerlind

Title: Technical Director/Representative

Date: 07/11/11

ORGANICS

PETROLEUM HYDROCARBONS

Project Name: 23 BARRY PLACE**Lab Number:** L1109562**Project Number:** 35034-103**Report Date:** 07/11/11**SAMPLE RESULTS**

Lab ID: L1109562-01
Client ID: 806 (4-6)
Sample Location: Not Specified
Matrix: Soil
Analytical Method: 11,3-99
Analytical Date: 07/03/11 20:31
Analyst: KG
Percent Solids: 81%

Date Collected: 06/28/11 11:05
Date Received: 06/28/11
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 07/01/11 10:25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
ETPH-CT	ND		ug/kg	16000	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	54		50-150

Project Name: 23 BARRY PLACE**Lab Number:** L1109562**Project Number:** 35034-103**Report Date:** 07/11/11**Method Blank Analysis**
Batch Quality Control

Analytical Method: 11,3-99
Analytical Date: 07/03/11 14:55
Analyst: KG

Extraction Method: EPA 3546
Extraction Date: 07/01/11 10:25

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01 Batch: WG476563-1					
ETPH-CT	ND		ug/kg	13000	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	66		50-150

Lab Control Sample Analysis**Batch Quality Control****Project Name:** 23 BARRY PLACE**Project Number:** 35034-103**Lab Number:** L1109562**Report Date:** 07/11/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01 Batch: WG476563-2								
ETPH-CT	76		-		60-120	-		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
o-Terphenyl	84				50-150

Matrix Spike Analysis

Batch Quality Control

Project Name: 23 BARRY PLACE
Project Number: 35034-103

Lab Number: L1109562
Report Date: 07/11/11

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01 QC Batch ID: WG476563-3 QC Sample: L1109653-03 Client ID: MS Sample												
ETPH-CT	ND	117000	69000	59		-	-		50-150	-		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
o-Terphenyl	67				50-150

Lab Duplicate Analysis Batch Quality Control

Project Name: 23 BARRY PLACE

Project Number: 35034-103

Lab Number: L1109562

Report Date: 07/11/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01 QC Batch ID: WG476563-4 QC Sample: L1109653-03 Client ID: DUP Sample						
ETPH-CT	ND	ND	ug/kg	NC		30

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	39	Q	38	Q	50-150

METALS

Project Name: 23 BARRY PLACE

Lab Number: L1109562

Project Number: 35034-103

Report Date: 07/11/11

SAMPLE RESULTS

Lab ID: L1109562-02

Date Collected: 06/28/11 11:30

Client ID: AOC9-301S1

Date Received: 06/28/11

Sample Location: Not Specified

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 68%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
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CT RCP Total Metals - Westborough Lab

Arsenic, Total	22		mg/kg	0.56	--	1	06/30/11 12:08	07/06/11 15:09	EPA 3050B	77,6010B	MG
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Project Name: 23 BARRY PLACE**Lab Number:** L1109562**Project Number:** 35034-103**Report Date:** 07/11/11**SAMPLE RESULTS**

Lab ID: L1109562-03

Date Collected: 06/28/11 11:35

Client ID: AOC9-302S1

Date Received: 06/28/11

Sample Location: Not Specified

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 52%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
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CT RCP Total Metals - Westborough Lab

Arsenic, Total	15		mg/kg	0.71	--	1	06/30/11 12:08	07/06/11 13:41	EPA 3050B	77,6010B	MG
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Project Name: 23 BARRY PLACE**Lab Number:** L1109562**Project Number:** 35034-103**Report Date:** 07/11/11**SAMPLE RESULTS**

Lab ID: L1109562-04

Date Collected: 06/28/11 11:40

Client ID: AOC9-303S1

Date Received: 06/28/11

Sample Location: Not Specified

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 78%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
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CT RCP Total Metals - Westborough Lab

Arsenic, Total	3.5		mg/kg	0.46	--	1	06/30/11 12:08	07/06/11 13:44	EPA 3050B	77,6010B	MG
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Project Name: 23 BARRY PLACE**Lab Number:** L1109562**Project Number:** 35034-103**Report Date:** 07/11/11**SAMPLE RESULTS**

Lab ID: L1109562-05

Date Collected: 06/28/11 11:45

Client ID: DUP3062811

Date Received: 06/28/11

Sample Location: Not Specified

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 66%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
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CT RCP Total Metals - Westborough Lab

Arsenic, Total	11		mg/kg	0.55	--	1	06/30/11 12:08	07/06/11 15:14	EPA 3050B	77,6010B	MG
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Project Name: 23 BARRY PLACE

Lab Number: L1109562

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Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
CT RCP Total Metals - Westborough Lab for sample(s): 02-05 Batch: WG476409-1										
Arsenic, Total	ND		mg/kg	0.40	--	1	06/30/11 12:08	07/06/11 13:39	77,6010B	MG

Prep Information

Digestion Method: EPA 3050B

Lab Control Sample Analysis**Batch Quality Control****Project Name:** 23 BARRY PLACE**Project Number:** 35034-103**Lab Number:** L1109562**Report Date:** 07/11/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
CT RCP Total Metals - Westborough Lab Associated sample(s): 02-05 Batch: WG476409-2								
Arsenic, Total	98		-		75-125	-		30

INORGANICS & MISCELLANEOUS

Project Name: 23 BARRY PLACE**Project Number:** 35034-103**Lab Number:** L1109562**Report Date:** 07/11/11**SAMPLE RESULTS****Lab ID:** L1109562-01**Client ID:** 806 (4-6)**Sample Location:** Not Specified**Matrix:** Soil**Date Collected:** 06/28/11 11:05**Date Received:** 06/28/11**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	81		%	0.10	NA	1	-	06/29/11 11:10	30,2540G	JC



Project Name: 23 BARRY PLACE

Project Number: 35034-103

Lab Number: L1109562

Report Date: 07/11/11

SAMPLE RESULTS

Lab ID: L1109562-02

Client ID: AOC9-301S1

Sample Location: Not Specified

Matrix: Soil

Date Collected: 06/28/11 11:30

Date Received: 06/28/11

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	68		%	0.10	NA	1	-	06/29/11 11:10	30,2540G	JC
pH	7.2		SU	-	NA	1	-	06/29/11 00:45	1,9045C	KK
Oxidation/Reduction Potential	80		mv	10	NA	1	-	06/29/11 00:30	68,1498	KK
CT RCP General Chemistry - Westborough Lab										
Chromium, Hexavalent	ND		mg/kg	1.2	--	1	06/30/11 11:00	07/01/11 16:38	77,7196A	NR



Project Name: 23 BARRY PLACE

Project Number: 35034-103

Lab Number: L1109562

Report Date: 07/11/11

SAMPLE RESULTS

Lab ID: L1109562-03

Client ID: AOC9-302S1

Sample Location: Not Specified

Matrix: Soil

Date Collected: 06/28/11 11:35

Date Received: 06/28/11

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	52		%	0.10	NA	1	-	06/29/11 11:10	30,2540G	JC



Project Name: 23 BARRY PLACE**Project Number:** 35034-103**Lab Number:** L1109562**Report Date:** 07/11/11**SAMPLE RESULTS****Lab ID:** L1109562-04**Client ID:** AOC9-303S1**Sample Location:** Not Specified**Matrix:** Soil**Date Collected:** 06/28/11 11:40**Date Received:** 06/28/11**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	78		%	0.10	NA	1	-	06/29/11 11:10	30,2540G	JC



Project Name: 23 BARRY PLACE

Project Number: 35034-103

Lab Number: L1109562

Report Date: 07/11/11

SAMPLE RESULTS

Lab ID: L1109562-05

Client ID: DUP3062811

Sample Location: Not Specified

Matrix: Soil

Date Collected: 06/28/11 11:45

Date Received: 06/28/11

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	66		%	0.10	NA	1	-	06/29/11 11:10	30,2540G	JC
pH	7.3		SU	-	NA	1	-	06/29/11 00:45	1,9045C	KK
Oxidation/Reduction Potential	58		mv	10	NA	1	-	06/29/11 00:30	68,1498	KK
CT RCP General Chemistry - Westborough Lab										
Chromium, Hexavalent	ND		mg/kg	1.2	--	1	06/30/11 11:00	07/01/11 16:39	77,7196A	NR



Project Name: 23 BARRY PLACE
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Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
CT RCP General Chemistry - Westborough Lab for sample(s): 02,05 Batch: WG476525-1										
Chromium, Hexavalent	ND		mg/kg	0.80	--	1	06/30/11 11:00	07/01/11 15:47	77,7196A	NR

Lab Control Sample Analysis**Batch Quality Control****Project Name:** 23 BARRY PLACE**Project Number:** 35034-103**Lab Number:** L1109562**Report Date:** 07/11/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,05 Batch: WG475909-1								
pH	100		-		99-101	-		
General Chemistry - Westborough Lab Associated sample(s): 02,05 Batch: WG475937-1								
Oxidation/Reduction Potential	100		-			-		
CT RCP General Chemistry - Westborough Lab Associated sample(s): 02,05 Batch: WG476525-2 WG476525-3								
Chromium, Hexavalent	84		80		75-125	4		35

Project Name: 23 BARRY PLACE
Project Number: 35034-103

Lab Duplicate Analysis

Batch Quality Control

Lab Number: L1109562
Report Date: 07/11/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,05 QC Batch ID: WG475909-2 QC Sample: L1109523-09 Client ID: DUP Sample						
pH	7.8	7.9	SU	1		5
General Chemistry - Westborough Lab Associated sample(s): 02,05 QC Batch ID: WG475937-2 QC Sample: L1109562-02 Client ID: AOC9-301S1						
Oxidation/Reduction Potential	80	77	mv	4		
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG476030-1 QC Sample: L1109561-02 Client ID: DUP Sample						
Solids, Total	85	84	%	1		20

Project Name: 23 BARRY PLACE**Project Number:** 35034-103**Lab Number:** L1109562**Report Date:** 07/11/11**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA**Cooler Information Custody Seal****Cooler**

B Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1109562-01A	Amber 120ml unpreserved	B	N/A	2	Y	Absent	TS(7),ETPH(14)
L1109562-02A	Amber 250ml unpreserved	B	N/A	2	Y	Absent	ORP-9045(1),CT-HEXCR-7196(30),CT-AS-6010T(180),TS(7),PH-9045(1)
L1109562-03A	Amber 250ml unpreserved	B	N/A	2	Y	Absent	CT-AS-6010T(180),TS(7)
L1109562-04A	Amber 250ml unpreserved	B	N/A	2	Y	Absent	CT-AS-6010T(180),TS(7)
L1109562-05A	Amber 250ml unpreserved	B	N/A	2	Y	Absent	ORP-9045(1),CT-HEXCR-7196(30),CT-AS-6010T(180),TS(7),PH-9045(1)

*Values in parentheses indicate holding time in days

Project Name: 23 BARRY PLACE
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GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- | | |
|----------|--|
| A | - Spectra identified as "Aldol Condensation Product". |
| B | - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. |
| C | - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses. |
| D | - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte. |
| E | - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument. |
| G | - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated. |
| H | - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection. |
| I | - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference. |
| M | - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte. |
| P | - The RPD between the results for the two columns exceeds the method-specified criteria. |
| Q | - The quality control sample exceeds the associated acceptance criteria. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less |

Report Format: Data Usability Report



Project Name: 23 BARRY PLACE**Lab Number:** L1109562**Project Number:** 35034-103**Report Date:** 07/11/11**Data Qualifiers**

than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.**RE** - Analytical results are from sample re-extraction.**J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).**ND** - Not detected at the reporting limit (RL) for the sample.

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REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 11 Analysis of Extractable Petroleum Hydrocarbons (ETPH) Using Methylene Chloride Gas Chromatograph/Flame Ionization Detection. Environmental Research Institute, University of Connecticut. March 1999.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 68 Annual Book of ASTM (American Society for Testing and Materials) Standards following extraction by SW-846 EPA Method 9045C under the requirements of MADEP BWSC, WSC-CAM-VIB. August 2004.
- 77 Connecticut DEP Quality Assurance and Quality Control Requirements for SW-846 Methods. CTDEP Reasonable Confidence Protocols (RCPs). Version 1.0, July 2005.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certificate/Approval Program Summary

Last revised June 7, 2011 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. NELAP Accredited Solid Waste/Soil.

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB), 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223 P/A), E. Coli. – Colilert (SM9223 P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D))

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E).)

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3,3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2130B, 2320B, 4500CI-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, SM2320B, 2510B, 2540C, 2540D, 426C, 4500CI-D, 4500CI-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. Organic Parameters: 608, 624, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

Solid Waste/Soil (Organic Parameters: ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water (Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, SM4500H-B. Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; ColilertQT SM9223B; MF-SM9222D.)

Non-Potable Water (Inorganic Parameters: (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn); (EPA 200.7 for: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl, V,Zn); 245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. Microbiology Parameters: (ColilertQT SM9223B;Enterolert-QT: SM9222D-MF.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 245.2, 300.0, SM4500CN-E, 4500H+B, 4500NO₃-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. Organic Parameters: 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 1664A, SW-846 9010, 9030, 9040B, 9050A, SM426C, SM2120B, 2310B, 2320B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH₃-H, 4500NO₃-F, 4500NO₂-B, 4500P-E, 4500-S2-D, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3510C, 5030B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A, 8151A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040B, 9045C, 9050C, 9065,1311, 1312, 3005A, 3050B. Organic Parameters: SW-846 3540C, 3546, 3580A, 5030B, 5035, 8260B, 8270C, 8330, 8151A, 8015B, 8082, 8081A.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO₃-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.2, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. Organic Parameters: EPA 332, 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500CI-E, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO₃-F, 4500NO₂-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM510ABC, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH₃-H, 4500-S D, EPA 350.1, 350.2, SW-846 1312, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, 4500CN-CE, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 8270C-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 8081A, 8082, 8151A, 8330, NJ OQA-QAM-025 Rev.7, NJ EPH.)

Solid & Chemical Materials (Inorganic Parameters: SW-846, 6010B, 7196A, 9010B, 9030B, 1010, 1030, 1311, 1312, 3005A, 3050B, 7471A, 9014, 9012A, 9040B, 9045C, 9050A, 9065. Organic Parameters: SW-846 8015B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 8270C-SIM, 3540C, 3545, 3546, 3550B, 3580A, 3630C, 5030B, 5035L, 5035H, NJ OQA-QAM-025 Rev.7, NJ EPH.)

New York Department of Health Certificate/Lab ID: 11148. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO₃-F, 2540C, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, SM4500CL-E, 4500F-C, SM15 426C, EPA 350.1, SM4500NH₃-BH, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-04-1-C, SM4500-NO₃-F, 4500-NO₂-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 9010B, 9030B.. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8015B, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. Organic Parameters: MA-EPH, MA-VPH.

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. NELAP Accredited.

Drinking Water (Organic Parameters: EPA 524.2)

Non-Potable Water (Inorganic Parameters: EPA 1312. Organic Parameters: EPA 3510C, 5030B, 625, 624, 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3050B, 6010B, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065, SM 4500NH₃-H. Organic Parameters: 3540C, 3545, 3546, 3550B,

3580A, 3630C, 5035, 8015B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. *NELAP Accredited via NY-DOH.*

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

Texas Commissoon on Environmental Quality Certificate/Lab ID: T104704476-09-1. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S²⁻ D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Department of Defense Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 332.0, 6860, 353.2, 410.4, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500NO3-F, 5220D, 5310C, 2320B, 2540C, 3005A, 3015, 9010B, 9056. Organic Parameters: EPA 8260B, 8270C, 8330A, 625, 8082, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9010, 9012A, 6860, 1311, 1312, 3050B, 7196A, 9010B, 3500-CR-D, 4500CN-CE, 2540G, Organic Parameters: EPA 8260B, 8270C, 8330A/B-prep, 8082, 8081A, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)

The following analytes are not included in our current NELAP/TNI Scope of Accreditation:

EPA 8260B: Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, Chloride in a soil matrix, TKN in a soil matrix, NO₂ in a soil matrix, NO₃ in a soil matrix, SO₄ in a soil matrix.

CHAIN OF CUSTODY RECORD

ALPHA-Inh # 71108567

Phone	860-282-9400
Fax	860-282-9500

H&A FILE NO.		LABORATORY		DELIVERY DATE		
PROJECT NAME		ADDRESS		TURNAROUND TIME		
H&A CONTACT		CONTACT		PROJECT MANAGER		
35034-103		Alpha Analytical		28 JUN 2011		
23 Barry Place		Westborough, MA		5 day		
Elida Danaher		Gina Hall		D. Molycka Downie		
Sample No.	Date	Time	Depth (ft bgs)	Type	Analysis Requested	Comments (special instructions, precautions, additional method numbers, etc.)
8006(4-6)	6/28/11	1109	4-6	SOI 1	VOCs SVOCs PAHs only ETPH by CTDEP method Total 8 RCRA Metals SPLP metals PCBs	Number of Containers
AO19-30151	6/28/11	1130	0-1.8	SOI 1	TOI AS	TOI SP27, Cr+P hold
AO19-30251	6/28/11	1135	0-2	SOI 1	X	X
AO19-30351	6/28/11	1140	0-0.9	SOI 1	X	X
DUP3002811	6/28/11	1145	-	SOI 1	X	X
Please Analyze as indicated: VOCs by EPA Method 8260 SVOCs (PAHs only) by EPA Method 8270 ETPH by CT DEP Method Total 8 RCRA Metals SPLP Metals PCBs by EPA 8082						
Note: CT RCP compliance required.						
Sampling Comments						
LIQUID						
VOA Vial						
Amber Glass						
Plastic Bottle						
Preservative						
Volume						
SOLID						
VOA Vial						
Amber Glass						
Clear Glass						
Preservative						
Volume						
Evidence samples were tampered with? YES NO						
If YES, please explain in section below.						

ETPH Mass Discrimination Check Form

Instrument ID: Petro9A.i

Injection date:

7/3/2011 12:30

Lab File ID: DATA001.D

	RF	%D
Total Etph	3926	
Nonane	3932	0.15
Decane	3898	-0.71
Dodecane	3894	-0.82
Tetradecane	3924	-0.05
Hexadecane	3935	0.23
Octadecane	3984	1.48
Eicosane	3943	0.43
Docosane	3816	-2.80
Tetracosane	3994	1.73
Hexacosane	3972	1.17
Octacosane	3959	0.84
triacontane	4012	2.19
Dotriacontane	3927	0.03
Tetratriacontane	4009	2.11
Hexatriacontane	3690	-6.01

Associated Samples:

WG476563-1
WG476563-2
WG476563-3
WG476563-4
L1109552-01
L1109552-04
L1109552-05
L1109562-01
L1109653-01
L1109653-03

ETPH Mass Discrimination Check Form

Instrument ID: Petro9A.i
Lab File ID: DATA015.D

injection date: 7/3/2011 23:55:00 PM

	RF	%D
Total Etph	3836	
Nonane	3922	2.24
Decane	3857	0.55
Dodecane	3878	1.09
Tetradecane	3901	1.69
Hexadecane	3904	1.77
Octadecane	3956	3.13
Eicosane	3901	1.69
Docosane	3769	-1.75
Tetracosane	3910	1.93
Hexacosane	3898	1.62
Octacosane	3897	1.59
triacontane	3909	1.90
Dotriacontane	3818	-0.47
Tetratriacontane	3741	-2.48
Hexatriacontane	3273	-14.68

Associated Samples:

WG476563-1
WG476563-2
WG476563-3
WG476563-4
L1109552-01
L1109552-04
L1109552-05
L1109562-01
L1109653-01
L1109653-03